

MISSOURI. Conservationist

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Preparation is Key

In the past three years, the state of Missouri has experienced 11 major weather events including tornados, floods, ice storms and even a giant windstorm. These events have caused considerable damage to local

communities but also to Conservation Department lands and infrastructure.

The Conservation Department works with the State Emergency Management Agency to provide assistance with emergency response in life threatening and public safety situations. In the early stages of an event, Department staff also take action to protect conservation areas and facilities from probable damage. As time progresses, the response shifts from emergency response to recovery response. In this stage, the Department takes action to restore conservation areas and infrastructure.

Since its beginning in 1937, the Department has acquired nearly 1,000 conservation areas across the state and has invested in the development of numerous facilities for the enjoyment of the public. Damages to conservation areas and facilities are costly and require a great deal of staff time for repair and restoration.

Ice storms and windstorms often cause damage to Department buildings, radio communication towers and, of course, trees. For instance, a giant straight-line windstorm officially known as a derecho occurred May 8, 2009, causing much damage in south Missouri. As a result of the 60- to 90-mile-per hour straight-line winds, a radio tower collapsed at Perryville. Fallen trees damaged the Department's Houston office and significantly impacted Montauk Fish Hatchery. Fallen trees and limbs also blocked and damaged numerous hiking trails at nature centers and many conservation areas. Thirty-three million board feet of standing timber were damaged on 13,000 acres of Department land in 35 counties. Recovery from this windstorm is still in

progress today as thousands of hours of Department staff time have been invested in cleanup and repairs.



Floods also cause a great deal of damage in various ways. Floodwaters deposit tons of mud and debris on boat launching ramps and parking lots at river accesses, requiring the use of heavy construction equipment for cleanup. Outdoor toilets are filled with mud and often damaged in high water events. The Department cold-water fish hatcheries at Montauk, Bennett Spring and Maramec Spring have often suffered loss of trout from fish rearing facilities during floods.

Floodplains and wetlands provide a great benefit in mitigating floods, however, managed wetlands are susceptible to damage from flooding. Floodwaters can cause erosion damage in wetland pools and around water control structures. In wet years such as 2008 and 2009, repairs to managed wetlands required staff attention. For example, in this two-year period alone, the wetlands of the Department's Fountain Grove Conservation Area in northwest Missouri were flooded more than 20 times.

In the past three years, the Department has invested more than 50,000 hours of staff time in disaster response and recovery. However, regardless of when or how often disaster strikes, you can be assured that dedicated Department staff are hard at work behind the scenes to restore Missouri's beautiful conservation areas and facilities for your enjoyment.

William F. Lueckenhoff,
design and development division chief

OUR MISSION: *To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide opportunity for all citizens to use, enjoy and learn about fish, forest and wildlife resources.*



Cover: American goldfinch by
Noppadol Paothong
Left: Lake #30 at August A. Busch
Memorial Conservation Area in
St. Charles by Noppadol Paothong

NextGEN

This section reports on goals established
in *The Next Generation of Conservation*.
To read more about this plan, visit
www.MissouriConservation.org/12843.

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WILD NIGHTS

I really enjoyed A *Good Night to Go Out*

[December]. I've coon hunted over 30 years since youth and that story brings back so many memories. Missouri has a long-standing tradition of hounds and hunting, and this region has some of the best coon hunting in the nation. It's great to see the Department support the fabulous sport of hunting raccoons behind hounds.

Mark Reavis, Crane

As I read the article about Mr. Martensen and his family coon hunting trips, my mind flooded with memories of my coon hunting adventures with my dad, family and friends. We would take the eager dogs out every evening, weather permitting. Sometimes there would only be two

or three of us, but other times we might have as many as five or six prowling through the woods. On school nights we would make short circles and try to be in by 9:00, but Friday and Saturday nights were the big hunt nights, and there was no deadline. Sunday was a day of rest. The dogs are long gone, Dad's knee no longer allows him to hunt, but the life lessons and memories are still with me everyday. Thank you for sharing this wonderful story!

Steve Fast, Bolivar

I hope I am reading the article wrong. There is no mention of the use of the raccoon other than the pelt. Please tell me that a staff member used the meat or at least gave it away to charity. If this is true, then this is not conservancy, but akin to the old days out West of the buffalo skinnners who wasted thousands of animals. I realize that scavengers will clean up after them. It's the principle.

Raymond Paul, via Internet

Author's note: You bring up a valid point and one that most furbearer hunters and trappers struggle with to some degree. As you noticed in the article we did not utilize the meat from that raccoon and only harvested the fur. I do not salvage the meat from every raccoon that I kill, but I do take meat from some of the younger raccoons for eating. I have not found a charity that would even consider taking raccoon carcasses; however, I have found some individuals that will occasionally accept them for eating.

You are also correct that scavengers will find those carcasses left in the woods and feed on them. I'm sure you have heard before, "Nothing is wasted in nature." I'm sure some lucky coyote or other scavenger type was very happy to find what I left behind. I will stop short of agreeing with your comparison to the days of the buffalo slaughters. Missouri's furbearers are protected by a season and restricted to taking by allowable methods. The furbearer population is monitored and evaluated frequently for signs of over-harvest or population declines. Currently, furbearer numbers in Missouri are at an all-time high. A regulated harvest of these animals is very important to help keep their populations at an acceptable level. When raccoon populations are high they are very prone to contract and spread diseases like canine distemper, which is a cruel killer of raccoons. When raccoons or other furbearers die from disease or other complications associated with overpopulation then the resource, both fur and meat, is totally wasted from a human consumption standpoint. Therefore, being able to hunt or trap furbearers and utilize only their fur does have value and satisfies basic conservation principles. We may not see eye to eye on this issue, but hopefully you have a better understanding of some of the dynamics and cultural aspects involved surrounding the management and harvest of furbearers in Missouri.—Rex Martensen, field program supervisor



Reader Photo

PRETTY PAIR

Peggy Franz of Arnold photographed this pair of cardinals in her backyard. "I was so excited because I have never been able to get a shot of two of them together. It was always just the male or female," says Franz. "We have five birdfeeders and suet feeders for all to share. We even put corn out to make the squirrels happy." Franz says she and her husband are always hiking and looking for wildlife.



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Turkey Season Is April 19–May 9

The Conservation Commission set 2010 spring and fall turkey hunting regulations at its December meeting. The regular Spring Turkey Hunting Season is April 19 through May 9. Other spring turkey hunting regulations remain unchanged from 2009, with a limit of two male turkeys or turkeys with visible beards. The 2010 Youth Spring Turkey Season for hunters age 6 through 15 is April 10 and 11. The 2010 Fall Turkey Hunting Season is Oct. 1 through 31. The Conservation Commission also approved turkey hunting regulations for conservation areas. These, along with information on managed hunts, will be published in the 2010 Spring Turkey Hunting Information booklet before the spring turkey season.

Touring Exhibits

Visitors to Conservation Department interpretive facilities can look forward to new attractions for each of the next four years as special exhibits tour the state. Each exhibit deals with a conservation issue of interest to citizens and includes a 20-foot back wall with an array of

hands-on, interactive features. Each also will have one or two island exhibits that allow visitors to explore and experience the topic. The exhibits will remain in place for one year before moving to new locations. Exhibit topics and first-year locations are:

- Rockwoods Reservation—"The Amazing

Forest" about the forest ecosystem.

- Busch Memorial Conservation Area—"Wetlands: Water at Work" emphasizes the varied wildlife activity in the habitat during morning, day and night.
- Shepherd of the Hills Visitor Center—"It's All Our Water" looks at watersheds and how even small changes affect our world's water.
- Runge Conservation Nature Center—"Experience Wild Missouri" is an outdoor skills adventure with a LaserShot interactive video that tests hunting knowledge and skill.

Suburb Curbs Deer Numbers

The City of Town and Country, in the heart of St. Louis County, has been looking for ways to control its deer population for more than a decade. The city had an estimated deer population density close to three times the recommended level of 25 per square mile. As a result, property damage and deer-vehicle collisions have exceeded what some residents were willing to accept. To reduce deer numbers, city officials hired a private contractor to remove 112 deer—mostly females—with sharpshooters. Meat from these animals went to needy families via Missouri's Share the Harvest program. The company hired licensed veterinarians to surgically sterilize another 100 does before releasing them. City officials are considering their next move in what Conservation Department biologists say needs to be an ongoing control program. Some other Missouri communities allow bowhunters to thin deer numbers.

Fur Prices, Trapping at Low Ebb

Fur prices are low, and furbearer trapping is waning in Missouri, according to data from recent trapping seasons.

The number of trappers and the number of furbearers they catch can vary widely from year to year, depending on pelt prices. Prices, in turn, depend on the world economy and on weather



in places as far away as Asia. People in Russia and China buy fewer furs in warmer-than-normal winters, and furs pile up on warehouse shelves, depressing prices.

Fur markets currently are in an extended period of low prices, and that has led to reduced trapping. The Conservation Department had only sold a little more than 4,000 resident trapping permits by the end of December 2009, compared to 6,400 for the 2008–2009 season.

Raccoons account for approximately 75 percent of the pelts sold in Missouri fur auctions. In 1979, when raccoon pelts brought an average of \$27.50 each, Missouri trappers caught and sold more than 634,000. Last year, with raccoon pelts worth less than \$10 each, Missouri trappers sold

only about 109,000. So far this year, extra-large raccoons are bringing \$4. Otter pelts, which sold for more than \$100 five years earlier, were down to \$26.91 last year, and bobcat pelts were down from \$50.15 to \$23.68. So far this year, bobcat pelts are selling for less than \$20.

The North American Fur Auction cancelled its fall sale and its first winter sale this year for the first time ever. Missouri trappers might have difficulty selling some pelts, such as coyotes, medium raccoons and opossums.

Trappers render an important service by helping control wildlife populations that otherwise would cause significant property damage. Thinning furbearer numbers also reduces the spread of such diseases as rabies and distemper.

Don't Set Bears Up for Disaster

Spring might seem a long way off to humans right now, but black bears are emerging from winter torpor, and their empty stomachs put them at risk. You can help keep bears safe by not encouraging them to form dangerous habits.

Natural foods are scarce this time of year, so bears that have not eaten much since last fall are more prone to ignore their natural fear of humans and seek nourishment in trash cans, livestock feed bins or even bird feeders. Those that get used to mooching from humans are many times more likely to cause trouble. Some have to be destroyed.

(continued on Page 6)



ASK THE OMBUDSMAN

Q: I saw what appeared to be puffs of smoke coming from my cedar trees. When I investigated, there was no fire there. Can you explain my observation?

A: Cedar trees, including our common Eastern red cedar, are conifers and produce male cones and female cones on separate trees. The cones on male cedars are small, rusty-brown, scaly structures that produce cedar pollen. When the male cones are mature, usually late February through March in Missouri, they release their dust-like pollen into the air. The pollen is so abundant that small “clouds” of it are released when a gust of wind shakes the branches of a male cedar tree. After the pollen is shed, the tiny male cones will fall from the trees. The pollinated female cones, on female trees, will continue to grow and develop into this year’s crop of cedar “berries.” I’m sure that your “smoke” was clouds of cedar pollen being released into the air.

Q: I just turned 65 years old. Am I now exempt from needing hunting and fishing permits?

A: Missouri residents 65 years of age or older are exempt from needing a small-game hunting permit or a fishing permit. You must carry proof of age and residence with you while hunting or fishing, such as a Missouri driver’s license. Depending on the type of hunting and fishing that you do, there may be other permits that you still must purchase, such as deer and turkey tags, migratory bird permit, trout permit, and daily trout tag at trout parks.



Male juniper

Ombudsman Tim Smith will respond to your questions, suggestions or complaints concerning Department of Conservation programs. Write him at PO Box 180, Jefferson City, MO 65102-0180, call him at 573-522-4115, ext. 3848, or e-mail him at Ombudsman@mdc.mo.gov.

Black bear sows with cubs are particularly susceptible to attraction by human foods, because their nutritional needs are greater. They also are more likely to get into confrontations with people, due to their natural protective instinct.

Ozark County is the epicenter of bear activity in Missouri, with 100 reports since 1987. The next-most-active counties are Taney, Carter, Reynolds and Howell. Other counties with significant bear activity include Iron, Shannon, Ripley, Barry, Christian, Stone and Douglas. If you live in or near one of these counties, take the following precautions to avoid tempting bears:

- Never intentionally feed bears.
- Do not feed pets outdoors.
- Keep garbage, livestock feed and other potential attractants in outbuildings or bear-proof containers.
- Clean up feed spills completely.
- Put out garbage as near to pickup time as possible.
- If a bear visits your bird feeders, take them down for two or three months to avoid becoming a regular stop on the bruin's foraging rounds.
- Clean outdoor grills after each use and store them in sheds.
- Don't place meat or sweet food scraps in your compost pile.
- Never cook, eat or store food in tents or sleeping areas when camping.
- Keep camp food locked inside vehicles when not in use.
- If a bear enters your campsite, get inside your vehicle and stay there until the bear leaves.

If you see a bear, please report it to the nearest Regional Conservation Department office (see Page 3) or call 573-751-4115.



Black bear



Spotted knapweed

Battling Knapweed

The Missouri departments of Conservation and Transportation are cooperating to beat back an invasion of spotted knapweed in southern Missouri.

The plant, *Centaurea stoebe*, is a perennial that grows approximately 2 feet tall and has attractive, fringy pink blossoms. This member of the aster family probably arrived in the United States in the late 1800s in contaminated hay or seed from Eurasia. Since then it has spread over 45 states.

Its roots produce chemicals that are toxic to other plants. It produces up to 1,000 seeds per plant. Once established, seeds accumulate in the soil, often exceeding 5,000 per square foot. The seeds remain viable for at least eight years. Seeds spread along roads by trucks transporting contaminated hay sprout in roadside ditches and quickly spread to bordering pastures and woodlands.

The plant is bad news, because it roots out native vegetation. Besides diminishing plant diversity, it has little value to wildlife. It is bad for agriculture, too. Infested pastures become less palatable and nutritious for livestock. In Montana alone, it caused \$42 million in agricultural losses in 1996.

You have to look closely to find early signs of a spotted knapweed infestation. The plant produces only a flat rosette of leaves during its first year, as it builds a deep taproot. State officials are battling roadside infestations with integrated pest management. This approach uses a combination of physical measures, such as pulling up plants, along with herbicides and weevils that eat spotted knapweed seed heads and bore into the plants' roots.

Missourians who would like to know more about spotted knapweed should contact Tim Banek, 573-522-4115, ext. 3371, tim.banek@mdc.mo.gov. You also can visit extension.missouri.edu/Webster/webster/agric/spottedknapweed.shtml.



Spotted knapweed

LOOKING AHEAD

The Department's new director, Robert L. Ziehmer, discusses the future of conservation in Missouri.

What is your vision that will help shape the future for Missouri conservation?

I see an exciting and bright future. My vision for the Department is that we shall be a forward-looking agency, ensuring integrity and trust, using adaptive learning and creative thinking, embracing technology and providing superior public service to advance conservation through 1) understanding natural resource and social landscapes, and 2) engaging and involving citizens.

The Missouri Conservation Commission chose Robert L. "Bob" Ziehmer as the eighth director of the Missouri Department of Conservation.



CLIFF WHITE

You start your job as director at a time of large staff changes. What does this mean for the agency?

More than half of our top agency leaders, as well as a significant number of staff statewide, will be retiring in 2010. In addition, due to lagging revenues, we're holding vacant 10 percent of our positions in the near term. This situation represents both challenges and opportunities for the agency.

Many of those about to retire are relatively young—many are in their 50s. Their knowledge of Conservation Department services and people will be an enormous asset as they move on to second careers and involvement in citizen conservation groups.

The staff remaining show the same enthusiasm, focus and accountability that have been hallmarks of this agency for seven decades. We are a group of people who face difficulties not only head-on, but also with an overwhelming abundance of talent and creativity. We are also a group of people who listen to stakeholders and understand their needs, who respect different views and value the contributions made by others, and who genuinely enjoy the work at hand and the people with whom we interact every day. These qualities will keep us strong and ready to adapt and serve.

What do you see as the big areas of agency responsibility in the coming decade?

Missouri's population, natural resource needs, economic conditions and the needs and desires of its citizens are all changing. The Conservation Department must focus on five overarching areas of responsibility:

1. Ensure healthy and sustainable forest, fish and wildlife resources throughout the state.



Ziehmer's outdoor interests include fishing, wildlife photography and hunting.

2. Manage lands held in public trust and associated infrastructure to ensure continued benefit to citizens and to forest, fish and wildlife resources.
3. Ensure sound financial accountability and transparency in all areas of operation.
4. Provide opportunities for active citizen involvement in programs and services and conservation education in both rural and urban areas.
5. Engage partners at the individual, community, county, state and federal levels to enhance natural resources and effective delivery of conservation services.

Our state's conservation success depends on continued citizen support. The Department must remain relevant by implementing actions that cultivate citizen interest, support and trust of our mission.

Last year people gathered at the "Summit on the Future of Missouri's Outdoors" identified conservation education as one of their top goals, yet there is concern that today's children are less connected than ever with nature. Are you trying new ways to address this?

On a personal level, I've been taking my daughters hunting, fishing or bird watching, depending on their interests, for years. Mentoring is one of the most effective ways to pass on an interest in the outdoors. The Department will continue to emphasize the importance of mentoring through a variety of services.

At the same time, many parents may not have that knowledge or interest themselves, so schools are one of the best ways to reach Missourians from all backgrounds and parts of the state. The Department plans to pursue this through expanding our schools program.

The Department has developed educational units that meet state testing standards for preschool through high school students. Feedback from teachers and students has been positive. Wouldn't it be great if all Missouri students could experience this hands-on outdoor learning to better ensure they understand the connections between conserving Missouri's forests, fish and wildlife and the quality of their own lives?

I fully believe that if you help folks grasp the conservation vision, in the long term you'll change many more acres than if you did habitat work alone.

You noted embracing technology as part of your vision. How do you expect the Conservation Department to embrace technology?

As the size and diversity of our state's population continues to grow, we'll need to use technology to inform and engage

all citizens. Things change faster now than ever, and that means we need to communicate with our constituents with unprecedented speed.

We will be doing everything we can to increase our responsiveness. We're in the process of a major enhancement to our Web site, for instance, so people will be able to access the most up-to-date information as easily as possible. Technology will also allow us to take key information directly to individuals, select stakeholder groups and the general public, versus depending on them to contact the Department. It is tremendously important to ensure that all citizens have an opportunity to learn about and understand the importance of our forest, fish and wildlife resources.

On the resource management side, technology will allow staff such as conservation agents and area managers to have real-time information to assist with tasks ranging from area maintenance, *Wildlife Code* enforcement, and communications with partners.

In many areas of our operations, greater use of technology will allow us to increase efficiency and productivity.

You'll be the eighth director in the Conservation Department's 73 years. It's rare for a state conservation agency, or any state agency, to have such stability of leadership. What has that meant for Missourians?

It reflects Missouri citizens' wisdom in setting up a constitutionally independent conservation agency guided by a balanced, bipartisan commission. Missourians have labored to establish and protect a management system that provides the Commission authority to make science-based resource decisions, focused on fulfilling citizens' expectations for sustainable resources. In addition, our state's conservation efforts have a broad management base, supported with dedicated funding, that gives consideration to forest, fish, and all species of wildlife.

The result has been a conservation system with a proven and successful track record, held up as a model by people around the world. Missouri citizens deserve the credit for establishing this unique and successful system of governance.

Today, efforts to ensure sustainable forest, fish, and



Ziehmer, 42, is a native of California, Mo., where he lives with his wife, Beth, and their daughters, Emily, 14 (back), and Lauren, 11.

wildlife resources add to our quality of life and have an incredible economic benefit. Simply stated, conservation "PAYS ITS WAY" by generating more economic activity outside the agency than it costs to operate.

What does it mean to you personally?

As long as I can recall, the outdoors has been an important part of my life. My parents, Carl and Andree, worked to provide outdoor experiences that sparked my interest in conservation. In addition, growing up—from a kid attending conservation events where movies were shown on the courthouse wall, to having my county conservation agent volunteer as scoutmaster—the diverse and broad world of conservation was shared by passionate Department employees.

I'm a California, Mo. native. I live there still with my wife, Beth, and two daughters. As I said before, I enjoy the outdoors in many ways—whether it's fishing, wildlife photography or hunting. My career with the Department began with a summer position in 1987. I feel blessed to be part of an agency whose mission continues to make a positive difference for Missourians and forest, fish and wildlife resources. ▲



A Perfect Pond

Make old ponds new again for
better fishing and family fun.

by MARVIN BOYER
and FRANK HAWKINS



Lake #30 at August
A. Busch Memorial
Conservation Area in
St. Charles was recently
renovated in order to
create "a perfect pond."

The countless ponds that dot farms, woods and suburban properties have provided immeasurable delights, including fishing thrills and tender family moments, such as when a child catches his or her first fish. However, many Missouri ponds are no longer helping knit families together or providing endless recreation. They've grown old as they've collected silt and soil from runoff and erosion. Many of them have become so shallow—less than 8 feet deep—that they experience fish kills.

What can you do when the pond you love is no longer capable of producing good fishing? The least expensive option is to let the aging process continue to the benefit of wildlife other than fish. Waterfowl, muskrats, salamanders and frogs are just a few animals that thrive in shallow fishless ponds.

Another relatively inexpensive option is to stock a small pond with adult hybrid sunfish in the spring to provide some fishing for the kids. Depending on the weather, these fish may die in a fish kill if not harvested annually.

It's also possible to make an old pond young again, returning it to its good old days,

when the fishing was great. The Conservation Department recently renovated a 4.8-acre pond at August A. Busch Memorial Conservation area. Our goal was to create “a perfect pond” from a silted-in unproductive pond. What we learned in the process should help private landowners who may be considering rejuvenating a pond on their property.

Can You Fix Your Pond?

You first have to discover whether the project is feasible. It's a good idea to consult with an experienced contractor (one with a bulldozer, track hoe and dump truck at a minimum) to discuss the renovation. This will help give you an idea of the time and labor involved and problems that the contractor might face with your pond. It will also give you a sense of how much it will cost. Regional Conservation offices (see Page 3) can provide you with a list of local conservation contractors.

Plan for an excavation schedule that allows adequate time for cutting the dam, allowing the pond basin to dry, moving the accumulated sediment (or “spoil”) to an appropriate location, and mulching and seeding the basin. Our 4.8-acre renovation took two months to complete and required us to haul, dry and spread 1.2 million cubic feet of spoil.

A perfect pond provides a variety of fishing opportunities. The best way to achieve this is to carefully plan the placement of materials, soil and cover while maximizing shoreline length. Catfishers and bank anglers are likely to prefer areas with a clean, hard bottom that slopes fairly quickly to deeper water, so those areas are excavated down to clay. This clean or relatively featureless area typically is located near the dam.

In other areas, we leave a 1- to 3-foot-deep layer of rich organic soils for aquatic vegetation. The soil may be pushed into humps or divided by trenches or channels. These areas become the production zones of the pond where aquatic plants, bugs and fish live and grow in large numbers.

The bottom of the pond away from the dam should be contoured to a more gradual slope. These large areas of shallow water (less than 4 feet deep) can be planted with several species of native aquatic vegetation. Spawning beds of pea gravel should be placed nearby.

Fishy Cover

Be creative when creating fishy cover for your pond. Many people use recycled Christmas trees, cut cedar trees, hardwood trees and wooden pallets for fish habitat, but almost anything will work as long as you keep it from floating around the pond. If you install fish habitat when the pond is dry, you can anchor it into the bottom with stakes or cable. If heavy equipment is available, you can arrange cedar trees into a dozer pile and cover the root mass with dirt to anchor the pile.

Once the pond is full, use cinder blocks or concrete anchors for brush piles. Many people build their brush piles, including anchors, on top of ice covered ponds so that the piles sink to the bottom when the ice melts. Another option is to use a johnboat to deliver brush pile components.

Cinder blocks and Christmas trees work well together. Simply put the trimmed tree trunk through the hole in the block and screw a piece of scrap lumber or plywood to the base of the tree to keep the block from slipping off. The bottom-weighted tree will stand vertically underwater and provide cover over a range of depths, depending on the size of the tree.

On ponds and lakes with fishing docks, a low-cost method of providing fish cover is to tie unweighted trees to the dock for a few months. When the trees become waterlogged and sink, simply cut or untie the rope and attach more trees. Eventually, you'll build up a pretty good brush pile right where you like to fish.

Building the Perfect Pond

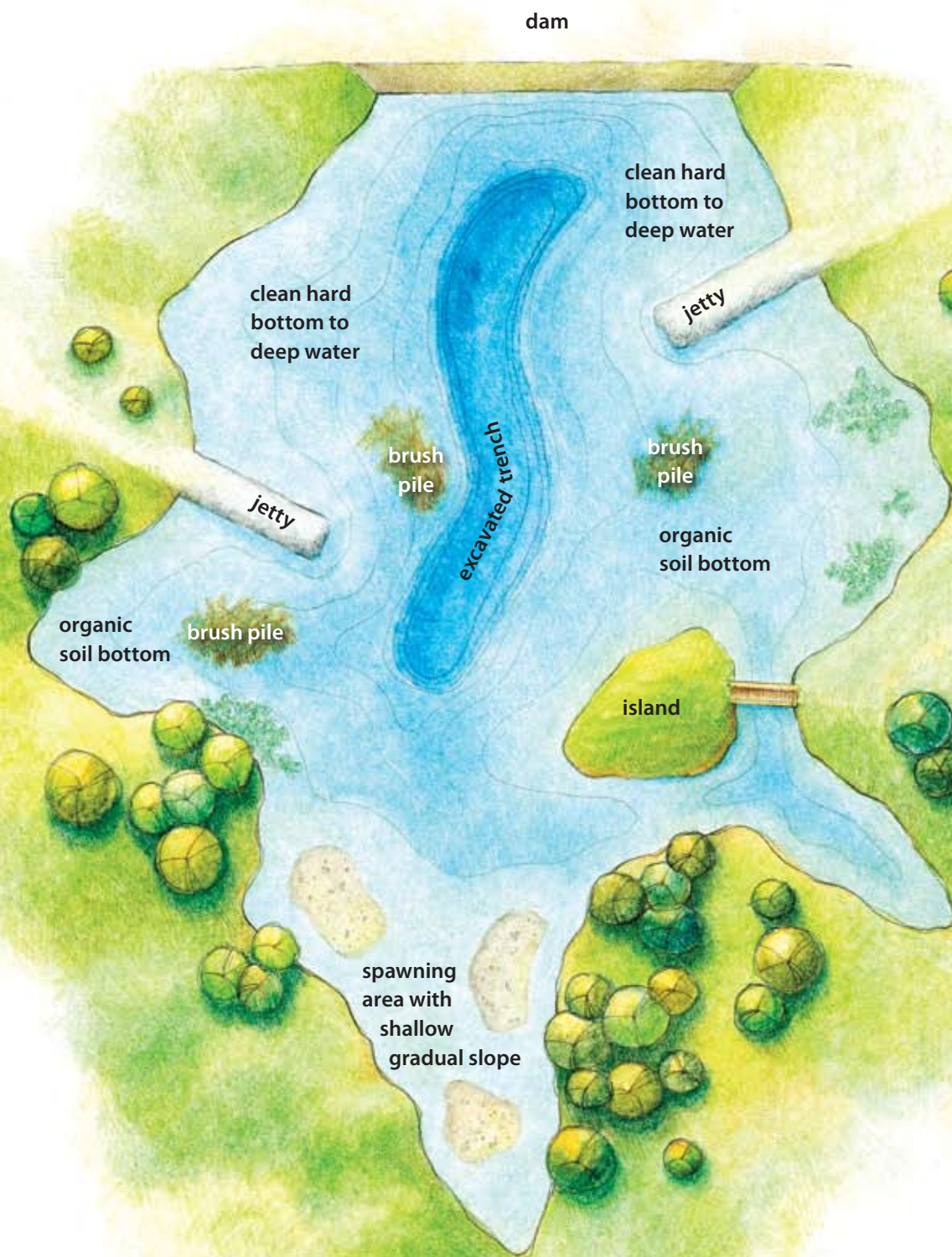


ILLUSTRATION BY LES FORTENBERRY

Old ponds needing renovation may have more than 6 feet of organic muck and sediments accumulated in the bottom of the lake.



The biggest scoop available quickly removes the sediments and muck down to the clean clay to reach the bottom in the deep end of the lake.



The tops of jetties, islands and face of the dam are lined with rock or planted in dense aquatic vegetation to prevent bank erosion.



Brushpiles and standing timber can be built into the design and anchored with soil or rock to provide valuable fish and aquatic insect habitat.



In our lake project, for example, half the lake bottom has a gentle slope, creating shallow water habitat, and about 40 percent of the shoreline harbors aquatic vegetation. We built spawning beds from 2 to 5 feet deep to provide spawning habitat at different depths. This encourages the hatching and rearing of sport fish to take place near shallow cover where a buffet of aquatic invertebrates helps boost their growth.

Another important benefit of leaving a layer of rich soil in the pond is providing nutrients for planktonic algae and zooplankton growth. This is the base of the food chain in your pond and directly relates to the pounds of sport fish your pond can grow without supplemental feeding or fertilizing.

Think of Fishing

Designing your pond so that deep water is close to open and easy-to-reach areas near the dam and shallow fertile water is more difficult to fish provides anglers with choices. Energetic anglers looking for big fish and quality habitat can walk or boat to distant cover while anglers who wish to avoid snags or who like to bottom fish can stay near the dam. Weed-free areas can be easily maintained with limited herbicides or a light stocking of grass carp after beneficial vegetation is established throughout the pond.

Covering parts of the shoreline and dam with rock, although expensive, adds a great deal of longevity to pond improvements because the rock reduces wave erosion and muskrat burrows. Rock can also be combined with excess clay and soil from the basin excavation to create jetties—20- to 80-yard peninsulas that reach toward the center of the lake. Cover the top 4 feet of jetties with a 2-foot blanket of rip-rap to keep them from eroding.

Jetties not only provide easy access to good fishing areas but also increase shoreline length and provide rocky cover, which produces more fish and invertebrates, especially crayfish. In our lake project, the shoreline measured 1,785 feet. Adding jetties and a small island increased the shoreline to 2,861 feet—a 38 percent increase in available shoreline and habitat for fish, invertebrates and anglers.

Woody habitat is also helpful. Use cedar trees and hardwood collected near the pond to build brush piles of various sizes for fish structure

after earth moving is complete. We put at least two sizeable (25- to 40-foot diameter) brush piles per acre and placed them in water 2 to 8 feet deep. A variety of woody materials, combined with earth moving equipment, can be used to create many different kinds of fish habitat. A good rule of thumb is that the more cover you install the more fish the pond can support.

A perfect pond will stay productive for a long time. That's because you will have made provisions for keeping as much soil as possible from the pond. Installing a silt basin directly upstream of the pond's main stream channel or drainage area can be considered preventative maintenance. And it's a relatively simple matter to clean out the silt basin every 10 to 15 years to keep it protecting your pond.

Fertilizing, straw mulching and seeding land around the pond—especially on the slopes draining toward the pond—helps soil from pouring in every time it rains. Fescue is the perfect grass for erosion control.

When the final grade is near completion, plug the dam with pure clay from the deepest part of the pond. Spread quality topsoil over the back of the dam repair, and complete any repairs or touch-up work on the front or back of the dam.

The fun part is about to begin. If the weather cooperates, it will soon be time for fish stocking. Typically the pond fills with water in a normal year without a problem, and in three to four years, the pond will be perfect, just as it was in the good old days. ▲

Covering parts of the shoreline with rock adds a great deal of longevity to pond improvements.



NOPPADOL PAOTHOONG





Fitting Thanks

*As your outdoor mentors age, share
with them the gift they shared with you.*

by MARK GOODWIN, photos by DAVID STONNER

THE ALARM CLOCK SOUNDS BEFORE DAWN on this Saturday morning, and I welcome it—I've been looking forward to this day all week. I pull on a pair of old blue jeans and a T-shirt and head down to the kitchen to prepare ham chowder for lunch.

What marks this day as special might not seem like much. I'm just taking two old guys fishing at a couple of farm ponds. But one of the old guys is my dad, and the other is Ray Miller. The three of us are long-time fishing buddies. Ray and his wife, Virginia, now live in Arizona. Whenever the Millers come to visit, I try to set up a fishing trip.

Dad and Ray introduced me to fishing when I was a kid, and they did a marvelous job. All my early fishing trips with Dad and Ray were packed with fun from beginning to end, and for good reason. They tailored those trips to me—a kid. Ensuring I had fun was goal number one.

Each year our families gathered for a weekend vacation at Bunker Hill Ranch, a cabin resort owned by the Missouri State Teachers Association along the Jacks Fork River. Dad, Ray and I would pull on wading shoes, bait jug traps with crushed crackers to catch minnows, then canoe downstream to one of the bigger bluff holes. With how-to pointers from Dad and Ray, I'd catch longear sunfish, goggle-eye and smallmouth bass. I'd also lay the fishing pole aside and catch tadpoles, crawdads and baby soft-shelled turtles—pretty much whatever I felt like doing.

As a kid I had a deep curiosity about nature. I always had lots of questions: *Is this rock a fossil? Why do dragonflies have big eyes? How can plants grow out of a rock bluff?* Dad and Ray always had time to take an interest in my questions, even if they didn't always have the answers.

As I grew older, I never lost my curiosity about nature, and my interest in fishing grew into a healthy obsession. The anticipation and joy of fishing, shared with family and friends, has provided an endless source of fun and fine memories. What a gift!

Returning the Favor

I think about these things as I stand at the stove, sautéing vegetables for the chowder. I ponder, too, how quickly time has passed. I'm in my early 50s. Dad is pushing 80, and Ray has passed that mark. With this passage of time has come change—now it is my turn to tailor fishing trips.

Peel away 20 years and Dad and Ray and I would be fishing all day on some Ozark stream. That's no longer practical. Walking over rocky gravel bars and shoals risks a fall, and eight hours of fishing is just too much. Pond fishing now suits, and trips of a couple hours are about right.

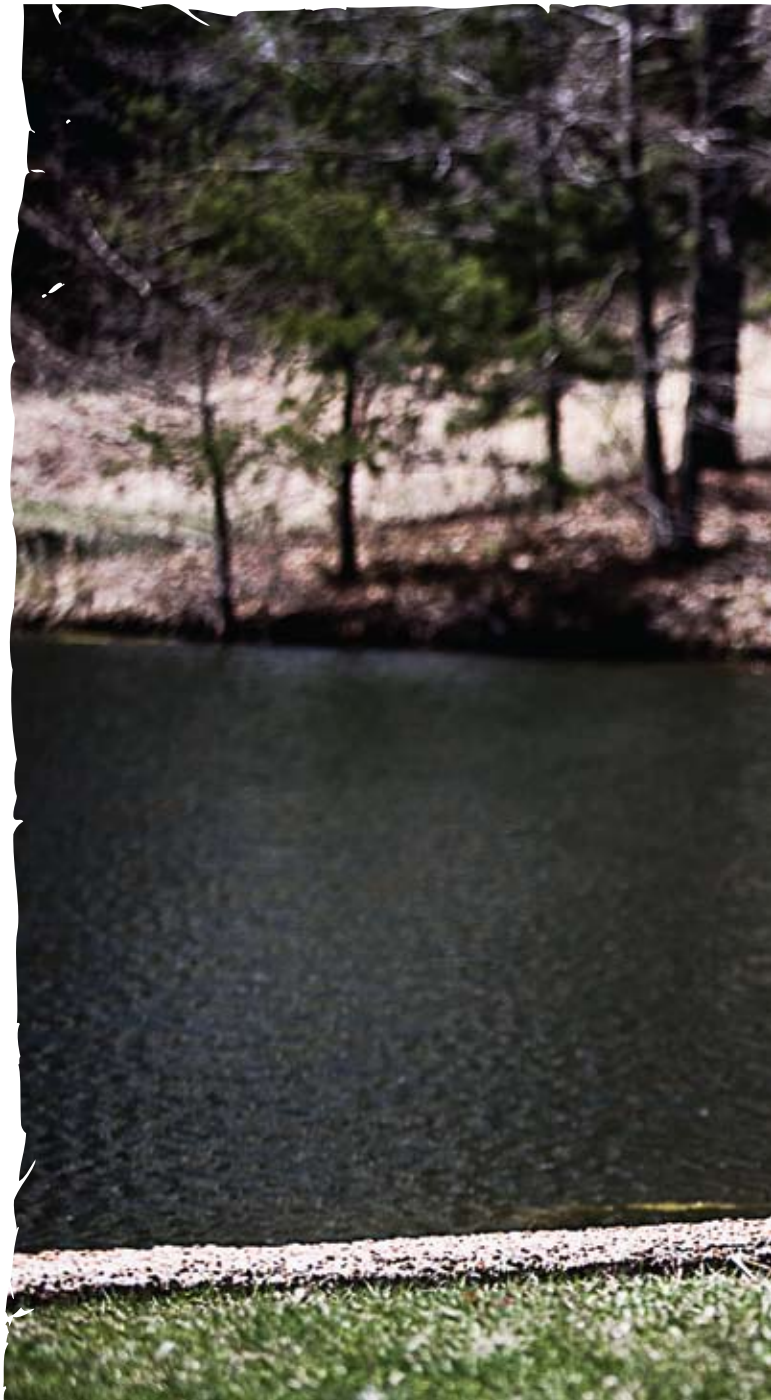
With chowder assembled and simmering on the stove, I gather my fishing gear. It's mid-October, a prime time to fish, but since September I've spent most of my free time in the dove fields working my three English pointers as retrievers.

As I begin checking my tackle, my pointers begin a chorus of barking, as they always do when a vehicle comes down the driveway. Dad and Ray have arrived. After hellos, we chat and joke as we gather gear and load into my pickup. I think we can all fit in my truck with Dad sitting in the back of the extended cab. Getting in is easy, but getting out proves tricky. It takes some gentle bending and pulling to extract Dad.

At this pond, access to the water's edge is usually easy. The landowner keeps it mowed. But we've had little rain the past two months, and the pond is low. A little more than 2 acres when full, the pond is barely more than an

acre now, ringed with a swath of grass 2 feet high with a 10-foot stretch of bare dirt where once was water. The grass lies bent and slick with dew, and the bare ground is at a slight angle. I watch carefully as Dad and Ray make their way to the pond's edge. Both go slowly and pick every step with care.

At the pond's edge, the focus turns to fishing. October has been unusually warm this year, but a cold snap the past three days should have cooled the water somewhat. I hope the change in weather has the fish biting. Throwing spinners, we all work the edges for 15 minutes with no luck. Ray is the first to start testing deeper water. He gets a strike and reels in a 10-inch bass.



"That a way, Ray!" I yell. "You're the meat man!"

In his big baritone voice, Ray answers back in a joking sing-song: "Ah, the meat man, the meat man!" He quickly unhooks the bass, drops the fish in his fish basket and gets back to fishing.

Ray and his wife and mom and dad are heading out to my parents' cabin tomorrow. Mom has plans for a fish fry and has given orders to bring home fish. This pond

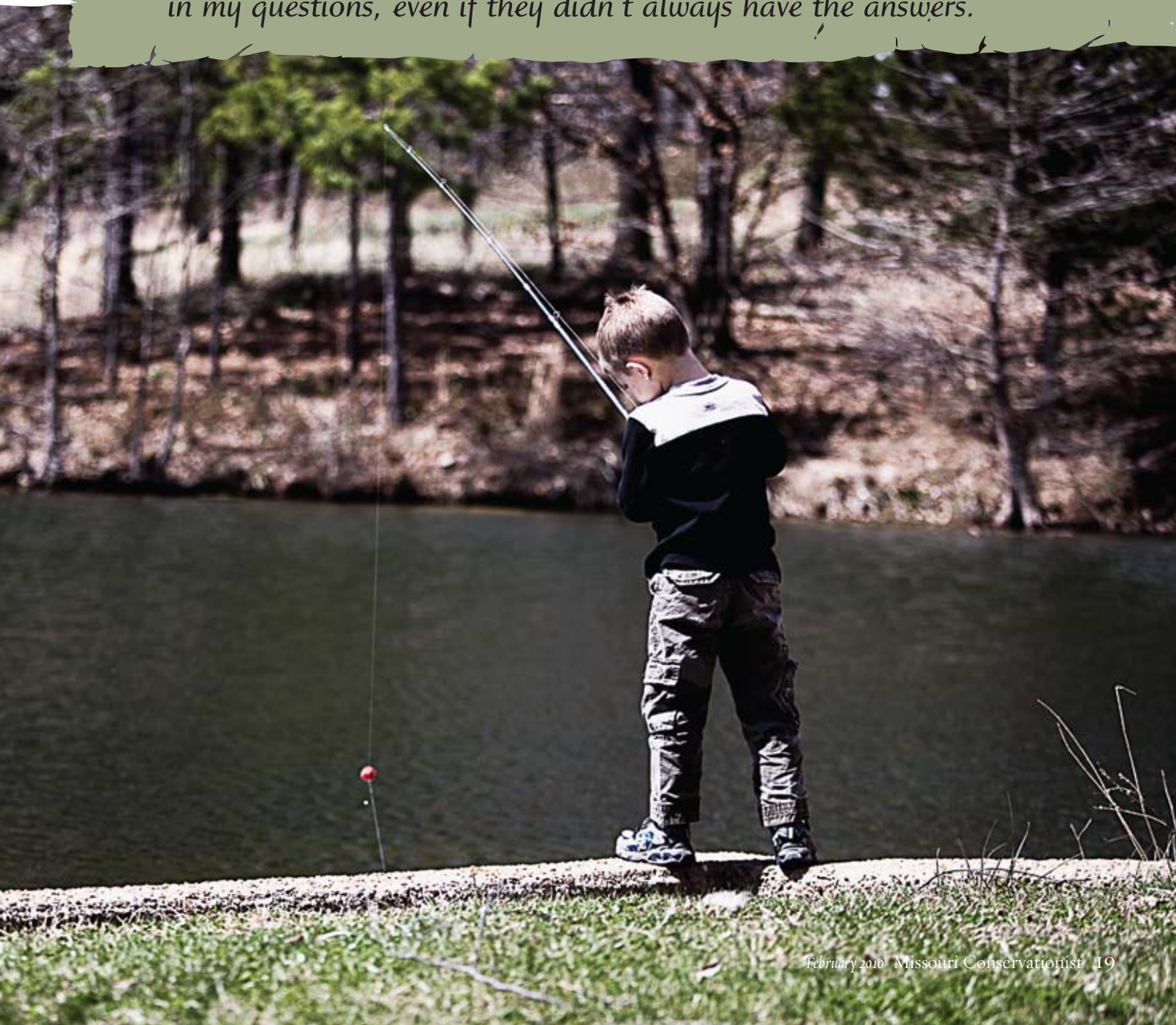
is overstocked with bass, and the landowner wants every one under 12 inches taken out.

I start casting to deeper water. I get a strike that peels off drag, seemingly without effort.

"I've got a heavy fish on!" I yell.

The fish pulls drag for 30 feet, then pulls free. I check the drag. It's set way too light. After Dad and Ray arrived, I forgot to finish checking my tackle. Oh, well.

As a kid I had a deep curiosity about nature. I always had lots of questions. Dad and Ray always had time to take an interest in my questions, even if they didn't always have the answers.



“Hey, it’s the meat man!” Ray pipes up again as he pulls in another bass. He’s having fun.

I finally connect on a 10-inch bass. Shortly after that, Dad does the same. Ray sticks to his spot.

As a kid, fishing with Dad and Ray, I well remember Dad telling me that if I wanted to learn how to fish, I should watch Ray. “You won’t find a better fisherman than

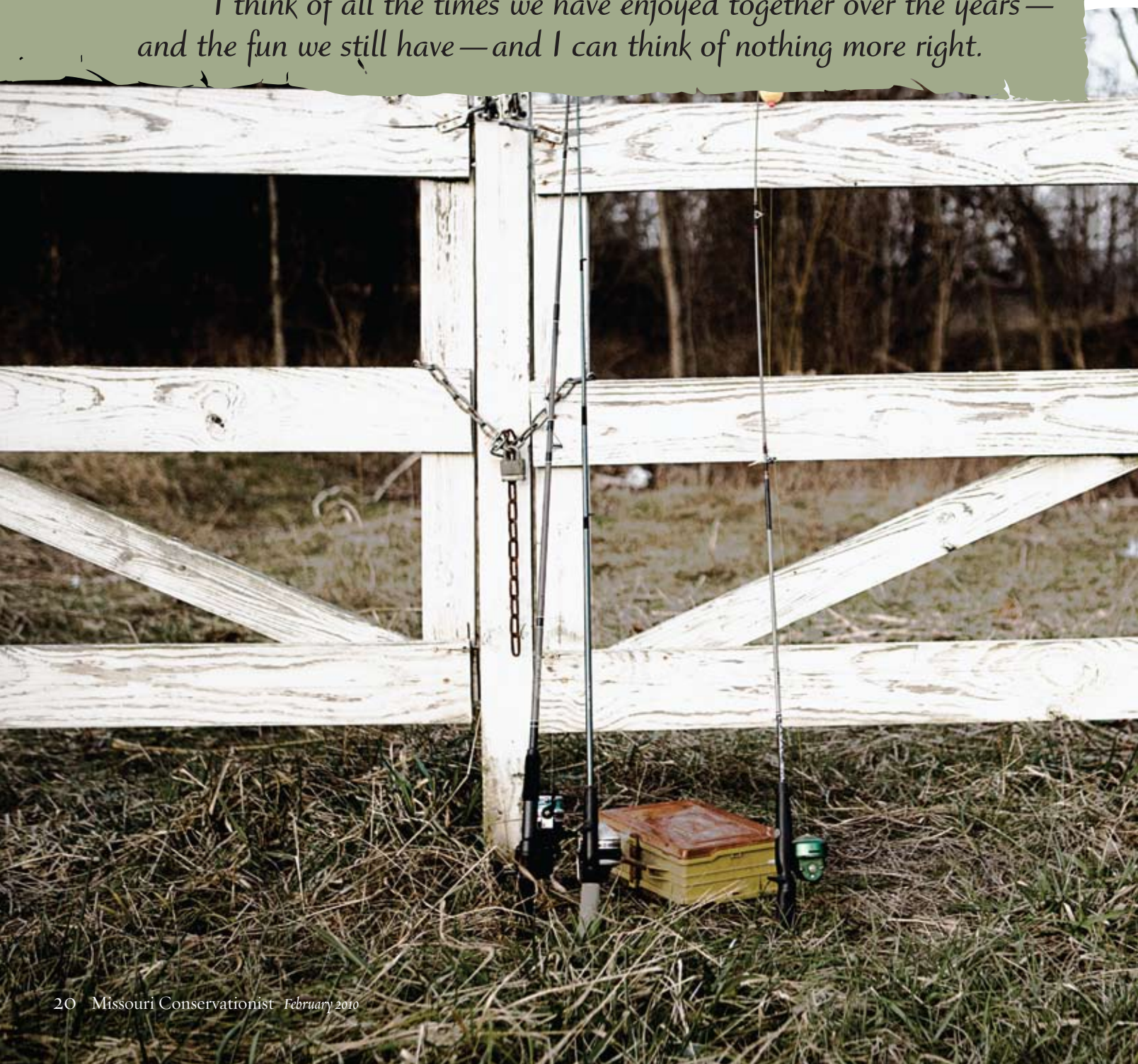
Ray Miller,” he’d say.

And I watched Ray fish. What impressed me was his patience. If he thought fish were using an area, he stuck with them.

Time has not diminished Ray’s patience, and he is doing what I’ve watched him do for years: catch fish. In 30 minutes Ray has five bass in his fish basket. I catch an

I think again of my first fishing trips with Dad and Ray.

I think of all the times we have enjoyed together over the years — and the fun we still have — and I can think of nothing more right.



8-inch bluegill, and Dad catches another small bass. Then the fish turn off.

"You guys want to try the small pond behind the Methodist church?" I ask.

Both Ray and Dad give my suggestion the nod.

Ray sits in the extended part of my truck this time for the short ride.

At the church, I drive up to the fence that surrounds the field and pond. The fence is woven wire—not good for a couple old guys to climb. I park at the gate, which is

wired shut, unwire it, let Dad and Ray in, then wire the gate back shut. The pond is only a half-acre, and cattle have it muddy, but the pond holds big black crappie. We fish hard for 30 minutes with only a 5-inch bass brought to hand. We have nine fish in the cooler but need more for the fish fry.

I check my watch—not quite 11 a.m.

"You guys want to head back to my house? We could clean these fish, grab a bite of lunch, then see if we feel like heading to another pond."

"Sounds good to us."

No Better Reward

Back at the house I warm the chowder and pour tea for the guys. We sit and chat on the patio while I clean fish.

"Some guiding service you run," Ray tells me.

"I learned from the best."

With the fish cleaned, I head inside and wash my hands. As I ladle up three bowls of chowder, I think about Ray's compliment. Ray knows I've put some effort into this day and wants me to know he appreciates it. That's the kind of guy he is, just like Dad—thoughtful. It's an example they always set for me as a kid. It's also part of why I so enjoy their company.

Out on the patio, in the warm October sun, we enjoy the chowder. For dessert I plate up pumpkin pie I made the evening before.

"Mark," Ray tells me, "even if we don't catch another fish, I'm ready to book another trip."

Dad raises his hand and says, "Count me in!"

After pie, we give one more farm pond a try. Fishing action remains modest. For 30 minutes of fishing, Ray catches a 12-inch crappie, I catch a 16-inch bass and Dad comes up empty. Dad decides to make a lure change but has trouble threading line to lure.

"Need a hand, Pop?"

"What I need is a pair of younger eyes."

I walk over and thread the line on for Dad. On his first cast, Dad gets a strike and reels in a largemouth that weighs about a pound.

"Fellas," Dad announces as he unhooks his bass. "We've got all the fish we need. If you're ready, let's head on back."

At home I clean the fish, and we enjoy a drink to toast the day.

As Dad and Ray load up to head home, I think again of my first fishing trips with these guys. Me, just a kid of 6 years, learning to fish and skip rocks, while Dad and Ray, young men in their late 20s, provided the setting. I think of all the fish we have caught and the times we have enjoyed together over the years—and the fun we still have. And I can think of nothing better or more right. ▲







Regulations 2010 Update

Seasons, limits
and methods
expand for 2010.

EACH YEAR, the Conservation Commission evaluates regulations to ensure Missourians have many ways to enjoy our forest, fish and wildlife. In doing so, the commission also is careful to protect the great resources that we have for future generations. The new regulations that go into effect March 1 expand hunting, trapping and fishing opportunities by adding new methods, longer seasons and increased limits for some species. Other regulations protect native species by trying to limit diseases and exotic species from entering the state.



According to new regulations, trappers will be able to take more otters in many parts of the state this year because the otter and muskrat trapping zones have been eliminated.

The following regulation changes encourage more people to enjoy the outdoors:

- Surveys of small-game hunters showed that fewer people are hunting squirrels today than were pursuing them five years ago. To encourage new hunters to take up this sport and to allow avid squirrel hunters more time in the field, the daily limit is increased from 6 to 10, and the possession limit from 12 to 20. According to population surveys, an increase in harvest should not negatively impact this abundant resource.

- Thermal imaging equipment has been added to the list of prohibited hunting methods. Like spotlighting, thermal imaging equipment gives hunters an unfair advantage. It also is a tool that could be used by deer poachers who hunt during closed hours.

- Trappers will be able to take more otters in many parts of the state this year because the otter and muskrat trapping zones have been eliminated. The new statewide season runs from Nov. 15–Feb. 20 with no limit. This change simplifies the regulations and allows more trappers to help reduce otter conflicts during the regular trapping season. Muskrat season also is statewide, which allows trappers to sell muskrats that are accidentally caught, thus making wise use of a resource. Also, the deadline for tagging bobcat and otter pelts has been extended to April 10.

The new statewide season for trapping muskrat and otter runs from Nov. 15–Feb. 20 with no limit, which allows trappers to sell muskrats that are accidentally caught.



Muskrat

- Trappers who use cable restraint devices need to be aware of several changes. First, cable restraint devices may be used from Dec. 15 through the last day in February, giving trappers an extra month to take coyotes and other furbearers. Also, the Cable Restraint Device Permit has been eliminated. Now the only permit required is a Resident Trapping Permit. However, trappers who want to use cable restraint devices are still required to complete a certified training course. This is to ensure they have been taught how to correctly use these devices, similar to snares, so that nontarget animals can be released unharmed. The Resident Trapping Permit will indicate if the trapper has completed the course and is certified to use cable restraints.

- Requiring anglers to watch their unanchored jug lines helps reduce catfish waste and jug-



line litter. However, to allow anglers to put out jug lines in several locations on a lake, unanchored jug lines must be personally attended at least one time per hour instead of the entire time the jug line is set. On streams, however, jug lines still must be personally attended at all times.

• Ice fishing tackle, or tip-ups, are now considered a pole-and-line method. This will allow anglers to use this tackle in areas where only poles-and-line methods are allowed.

• At the request of people interested in bowfishing tournaments, the Conservation Department now allows bowfishing 24 hours a day on rivers where commercial fishing is allowed. These rivers include: the flowing portions of the Missouri River, the Mississippi River except in Sand

Chute below the mouth of the Salt River in Pike County, and that part of the St. Francis River which forms a boundary between the states of Arkansas and Missouri, and also waters which exist temporarily through overflow from the Mississippi River east of the Missouri Pacific Railroad between Cape Girardeau and Scott City, and east of the Mississippi River mainline and setback levees between Commerce and the Arkansas state line.

• Since the floods of 1993, populations of exotic Asian carp have been expanding into Missouri's big rivers. To make it easier to harvest these species, some of which jump into boats, anglers can now take bighead, common, grass and silver carp by handnet and can keep those that jump into a boat or on land. These fish can be possessed in any numbers.

Beginning March 1, bowfishing is allowed 24 hours a day on rivers where commercial fishing is allowed.

Some regulations are designed to protect the health of individual species that are an integral part of Missouri's biodiversity. Some of these rules involve harvest regulations, and others are related to importation of exotic species. These changes are listed below:

- The number and populations of native mussels continues to be a concern in many states due to polluted waters and exotic mussel species that compete for their habitat. For many years, commercial fisherman were allowed to harvest native mussels; but as their numbers of mussels diminished, few fisherman were taking them. As a result, mussels may no longer be taken and sold by commercial fisherman.

HOW REGULATIONS ARE SET

Each year the Regulations Committee reviews the *Wildlife Code* of Missouri to ensure the state's forests, fish and wildlife are protected. Here's how the process works.

1. Changes proposed by the public and staff are brought to the committee to review.
2. The committee researches the effects of the proposed regulation changes. Information reviewed may include costs to taxpayers, effects on wildlife populations, user group surveys, public comments and feasibility studies.
3. When research shows a change could improve management of a species or provide more opportunities for Missourians to enjoy the outdoors, a proposed regulation change is sent to the director.
4. If the director approves the change, the proposal is submitted to the Conservation Commission, four citizens appointed by the governor.
5. If passed by the Commission, the proposed changes are filed with the secretary of state and published in the Missouri Register. The link can be found at www.MissouriConservation.org/19400.
6. The filing begins the 30-day public comment period. If no comments are received, the final regulation is filed and becomes effective either 30 days after publication in the *Missouri Code of State Regulations* or on the date specified in the proposal.
7. When comments are received, the proposal is reviewed. Based on the public's comments, the Commission may decide to drop, modify or implement the regulation.



DAVID STONNER

- Common snapping and softshell turtles are other species that are harvested commercially, but few are reported each year. Now commercial fisherman must report all species and the number of turtles harvested. Researchers in many states are concerned about the harvest of these long-lived species, and the information received from the new harvest forms should help protect these important aquatic reptiles.

- Keeping Missouri's deer herd free from chronic wasting disease continues to be a high priority. In the past, the Conservation Department monitored CWD in captive deer herds. Now the Missouri Department of Agriculture will be in charge of the herds, which are not part of Missouri's wild deer population. The Conservation Department will continue to test for CWD in wild deer and work with the Department of Agriculture if CWD is detected.

- Hunters who travel from another state and are transporting harvested deer, moose or elk with the spinal column or head attached must report the carcasses' entry into Missouri to the Conservation Department within 24 hours of



Exotic mussel species such as zebra mussels, left, compete with native mussels for habitat. The dwindling numbers of native species has called for a new regulation where commercial fisherman may no longer take and sell mussels.

entering the state, and the carcass must be taken to a licensed meat processor or taxidermist within 72 hours of entry. Meat processors and taxidermists must dispose of the spinal cord and other parts in a properly permitted landfill.

Hunters do not need to contact the Department if they are bringing back cut and wrapped meat that has been boned out, quarters and other portions of meat with no part of the spinal column or head attached; hides or capes from which all excess tissue has been removed; antlers; antlers attached to skull plates or skulls cleaned of all muscle and brain tissue; upper canine teeth; and finished taxidermy products.

• Two changes have been made to the Wildlife Collector's Permit, which allow researchers to take species from the wild to study. To help keep diseases from spreading, wildlife held in captivity away from the area they were taken are not to be returned to the wild unless approved ahead of time. Also, helpers who do not have their own permit must be under the direct, in-person supervision of the permit holder at all times.

• Because commercially reared tiger salamander larvae—also called waterdogs or mudpuppies—are often infected with diseases that could harm native species, they may not be sold for live bait in Missouri. The diseases they carry have caused massive die-offs of amphibians in areas where they have been sold as bait.

• In the past, trout infected with parasitic copepods were not allowed to be stocked in any fish-rearing facility that discharges water to streams. However, starting this year in areas that are already infected with copepods, infected fish may be stocked in those areas only.

• Aquaculturists requested the addition of Atlantic salmon to the Approved Aquatic

Species list to permit this species to be reared in facilities that discharge to waters of the state. Because any salmon that escape from such facilities are unlikely to successfully reproduce in the wild, this request was approved. Atlantic salmon, however, must be certified as free of several diseases that could affect native aquatic species before they can be imported.

• The Conservation Department has more than 1,000 conservation areas around the state. To allow for quality hunts, fishing and other outdoor experiences, area managers sometimes request changes on their areas. This year, some areas will have new length limits on bass, longer hours for dove hunting; some banned float tubes, and others changed rules on using decoys and blinds. To see all the regulations on a specific conservation area and to find out what is available to do, go to www.MissouriConservation.org/2930. You can search by county, area name or region. ▲

The Conservation Department will continue to test for chronic wasting disease in wild deer and work with the Department of Agriculture if detected.



Raccoon

Don't let their bad reputation alarm you, these masked furbearers do good as well as mischief.

ONE OF MISSOURI'S more infamous troublemakers, the raccoon (*Procyon lotor*) does more than just invade trash cans and make a ruckus.

The raccoon's coloring is one of the natural world's great icons, with its legendary "robber's mask" and ringed tail. In both males and females, the primary body color ranges from a grayish-yellow to a dark brown. Females average between 6 and 20 pounds, males weigh from 8 to 40 pounds.

An omnivorous, opportunistic feeder, raccoons are adept at foraging for plant matter, such as Osage orange fruit, wild blackberries, acorns, grapes and persimmons, or hunting prey. What raccoons eat is largely dependent on what they can find. Snakes, turtles and their eggs, crayfish, lizards, frogs, rabbits, muskrat, snails, slugs and earthworms are all on the menu. As a nocturnal animal, the bulk of its hunting and gathering is done at night.

In Missouri, raccoons are abundant in hardwood timbered habitat such as forestlands, but also will make their home territory near smaller stands of trees near a water source, such as a stream, pond or swamp. They den in hollowed out trees or small caves, crevices, abandoned burrows and dens, and other similar places. Raccoons are found statewide. Solitary creatures, males occupy a home territory of about 1 square mile, while females and their young occupy about $\frac{3}{4}$ square mile. In severe winter weather, raccoons will burrow together and are largely inactive.

Females come into breeding condition in December or January. Most breeding occurs in January and February, but some may take place later in the spring. Most litters are born in April or early May, but some, the result of late matings, may arrive in June, July or August. Gestation is about 63 days, with litters of three to four kits, or cubs, per litter. Raccoons usually have one litter annually. The kits weigh 2.5 ounces at birth and are completely covered in fur. If they are not born with the typical mask across the eyes, they develop it within 10 days. The kits will stay in the den for eight to 10 weeks, until they are old enough to begin foraging with their mother. Most of the young raccoons will stay with their mother until the following spring.

Though they tend to be on the large side, raccoons are not without predators. Owls, bobcats, red foxes, coyotes and free-running dogs will prey on the raccoon. Trapping or hunting raccoons for fur or food is also a popular pursuit.

Despite a reputation for foraging through trash, raccoons are actually an important part of their local ecosystem and are great for pest control. Their taste for insects, mice and other nuisance animals make them a helpful, if quirky neighbor.

—Jason Granger, photo by Noppadol Paothong

For More Information

To learn more about raccoons, visit www.MissouriConservation.org/8354.





DuPont Reservation CA

Get a bang out of visiting this Mississippi River Hills area south of Hannibal in Pike County.



THE DUPONT RESERVATION Conservation Area was the site of an explosives factory from 1892 through 1932. The E.I. DuPont de Nemours and Company produced dynamite and nitroglycerin for lead, zinc and coal mines in the tri-state area and oil fields in Oklahoma. To reduce the chance of a chain explosion, should one of the buildings

blow up, the company built separate facilities in different valleys. To our knowledge, none of the buildings ever blew up, but a number of old foundations remain scattered throughout the area to remind visitors of its industrial history.

In 1938, the owners donated 1,122.8 acres to the Conservation Commission. Since then, land purchases increased the area's size to its present 1,320 acres. Composed of upland and bottomland timber, old fields and grassland as well as plantations of walnut, cottonwood, tulip poplar and bald cypress trees, the area borders the Mississippi River.

A concrete boat ramp gives visitors access to the river, and it's a good place to enjoy the peace of the river and do a little fishing. Anglers will find good populations of catfish, crappie and big river fish. Next to the boat ramp is a primitive campground, also with great views of the river. The campground has camping pads, fire rings and a disabled-accessible privy. Backpackers can float or walk in anytime except during firearms deer and turkey seasons. Hunters will appreciate good populations of deer, squirrel and turkey.

Within the reservation lies DuPont Forest Natural Area. This 80-acre tract is a mixed upland hardwood forest and small limestone glade lying within the Lincoln Hills Section of the Glaciated Plains Natural Division. Basswood, northern red oak, white oak, chinquapin oak and sugar maple are common overstory trees. This natural area doesn't have a designated hiking trail, but experienced hikers will find a beautiful, challenging hike through the forest. The rugged terrain offers breathtaking views of the river and supports a wide variety of songbirds and wildlife.

DuPont Reservation CA and DuPont Forest NA are beautiful anytime of year, but especially in the spring when the redbuds and dogwoods bloom. Plan to visit them again in the fall when the sugar maples glow yellow and orange among the oaks' ruddy hues—evoking a different burst of color from a different time.

—Bonnie Chasteen, photo by David Stonner

Recreation opportunities: Scenic camping, floating, backpacking, fishing, hunting and wildlife viewing

Unique features: Spectacular views of the Mississippi River floodplain from the Little Dixie National Scenic Byway (Highway 79)

Location: Sixteen miles south of Hannibal on Highway 79 near Ashburn

For More Information

Call 573-248-2530 or visit www.MissouriConservation.org/a4604.





Hunting and Fishing Calendar

FISHING

	OPEN	CLOSE
Black Bass (certain Ozark streams, see the <i>Wildlife Code</i>)	5/23/09	2/28/10
impoundments and other streams year-round		
Paddlefish	3/15/10	4/30/10
Nongame Fish Snagging	3/15/10	5/15/10
Trout Parks Catch and Release	11/13/09	2/8/10
Friday—Monday at Bennett Spring, Montauk and Roaring River and daily at Maramec Springs		

HUNTING

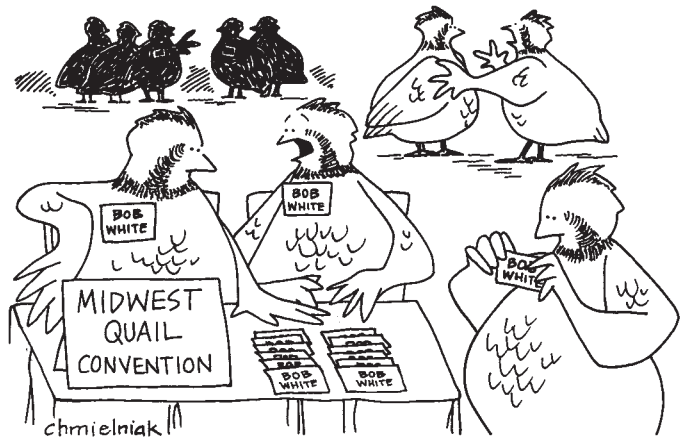
	OPEN	CLOSE
Coyotes	5/12/09	3/31/10
Crow	11/1/09	3/3/10
Rabbits	10/1/09	2/15/10
Squirrels	5/23/09	2/15/10
Turkey		
Youth (resident only)	4/10/10	4/11/10
Spring	4/19/10	5/9/10
Fall Firearms	10/1/10	10/31/10
Waterfowl	please see the <i>Waterfowl Hunting Digest</i> or see www.missouriconservation.org/7573	

TRAPPING

	OPEN	CLOSE
Beaver & Nutria	11/15/09	3/31/10

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest* and the *Migratory Bird Hunting Digest*. For more information visit www.MissouriConservation.org/8707 or permit vendors.

The Department of Conservation's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800-392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlifelicense.com/mo/.



"Do you really think the name tags are necessary?"

Contributors



MARVIN BOYER is a fisheries management biologist from the St. Louis Region. He grew up fishing and hunting in rural Jefferson County. He left home and studied in Wisconsin, Florida and Utah. Happily back in Missouri with friends and family, Marvin enjoys spending time outdoors with his wife, Jennifer, and their three children.

MARK GOODWIN values hunting and fishing. He knows of no better way to understand nature. Afield with firearm, bow, or rod and reel, you live nature's connections. Hunting and fishing also provide a great way to connect with friends and family. Mark looks forward to sharing the outdoors with his grandchildren.



FRANK HAWKINS began his career with MDC in 1977. He has been involved in land restoration for quail habitat, road building, levee construction, wetland restoration, river accesses and many other projects. Frank most enjoys working with fellow employees, like Marvin Boyer, to restore and construct ponds and lakes.

WHAT IS IT?

Opossum

On the back cover and right is an opossum by Noppadol Paothong. It is a unique Missouri mammal because it is our only representative of a group of primitive mammals called marsupials, or pouched mammals, that live mostly in Australia. The females of this group typically have a prominent pouch on the belly where the young are carried and nourished for a time after their birth. In Missouri, the breeding season begins about the first of February. To learn more about opossums, visit www.MissouriConservation.org/8344.



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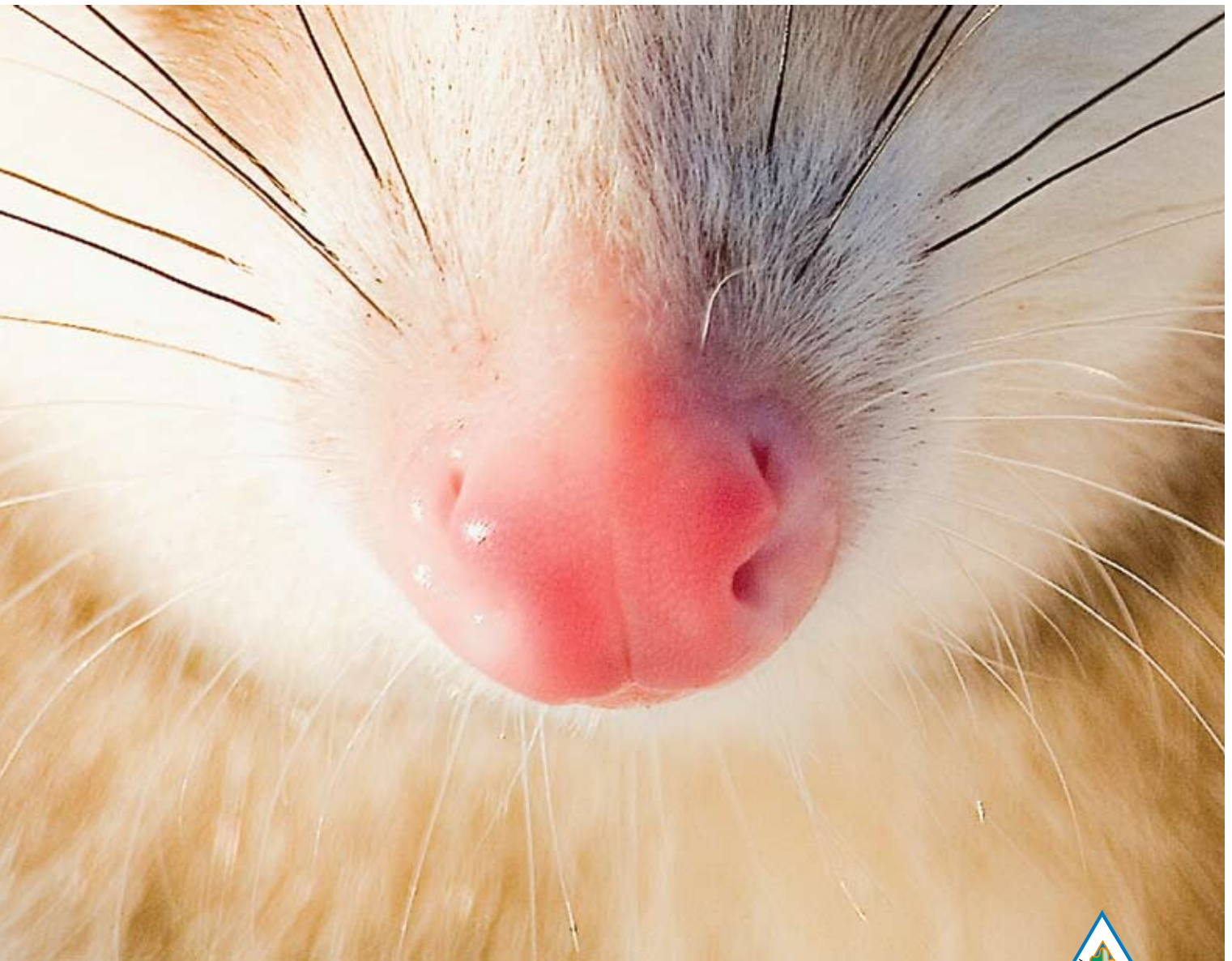
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Shawn Cunningham

WHAT IS IT?

Our photographers have been busy exploring the intricacies of the Missouri outdoors. See if you can guess this month's natural wonder. The answer is revealed on the inside of this back cover.



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